

**To:** Burns, Francis[Burns.Fran@epa.gov]  
**Cc:** Hodgkiss, Kathy[Hodgkiss.Kathy@epa.gov]; Melvin, Karen[Melvin.Karen@epa.gov]; Gross, Bonnie[Gross.bonnie@epa.gov]; Johnson, Eric[Johnson.Eric@epa.gov]  
**From:** Ioven, Dawn  
**Sent:** Wed 1/22/2014 1:24:54 AM  
**Subject:** Propylene Glycol Phenyl Ether (PPh) Toxicity

Hi, Fran. I conducted a literature search on the toxicity of PPh. Here's what I found:

- This compound is hydrophobic, meaning that it is not very soluble in water.
- Based on its chemical properties, the volatility of PPh seems to be low. This suggests that any release to air would occur at a slow rate.
- This compound does not appear to be very toxic in mammals, based on the following tox info in the literature:
  - o The oral Lethal Dose 50 (LD50) for this compound in rats is high (greater than 2000 mg/kg). LD50 values are important for determining acute toxicity. An LD50 of this magnitude would place this compound in the slightly toxic to relatively non-toxic range.
  - o Based on a drinking water study in rats, the No Observable Adverse Effect Level (NOAEL) for PPh is 1000 ppm (113 mg/kg/day). Translated to human exposures via ingestion, **up to 1800 ug/L PPh in tap water would not be expected to pose adverse health effects under conditions of chronic exposure.** (This calculation assumes an uncertainty factor of 1000, which is applied to the NOAEL to derive a provisional Reference Dose for risk calculations.)
  - o In terms of systemic toxicity via dermal exposure, the NOAEL in rabbits was greater than 1000 mg/kg/day, indicating that the dermal pathway contributes minimally to risk.
  - o Regarding maternal and fetal toxicity, the NOAEL in rats is 180 mg/kg/day, supporting other studies that suggest low toxicity for PPh.
  - o There is no indication in the literature that this compound is carcinogenic.

Hope this is helpful, Fran. Any questions, please give me a call at home. Thanks.

Dawn

---

Dawn A. Ioven, toxicologist

U.S. EPA - Region III

(3HS41)

1650 Arch Street

Philadelphia, PA 19103

215.814.3320